

Inval Claims

1. A device for measuring the mass of a flowing medium, in particular the intake air mass of internal combustion engines, with a temperature-dependent measurement element that the flowing medium circulates around, which is disposed in a measurement conduit extending in the device from an inlet to an outlet, which is adjoined by a deflection conduit, wherein the measurement conduit has two faces that approach each other in the direction of the flow in the measurement conduit, characterized in that the faces (37, 38) of the measurement conduit (30), which are disposed lateral to a surface (24) fixed by the measurement element (21), are embodied in an inclined fashion and approach each other in the flow direction (43) of the medium in the measurement conduit (30).

2. The device according to claim 1, characterized in that the flow cross section of the measurement conduit (30) is rectangular and has two faces (39, 40) extending parallel to the surface (24) of the measurement element (21).

3. The device according to claim 1 or 2, characterized in that an inclination angle α respectively enclosed by the faces (37; 38) that approach each other and an axis (12) passing through the center of the measurement conduit (30) is approximately 8° .

4. The device according to claim 1, characterized in that the measurement conduit (30) and the deflection conduit (31) are

comprised of two attachable parts, a base part (45) and a cover part (46).

5. The device according to claim 1, characterized in that an edge face (50) of a first part (51) of the deflection conduit (31) is embodied as inclined in relation to an axis (12) passing through the center of the measurement conduit (30).

6. The device according to claim 5, characterized in that an inclination angle β enclosed by the edge face (50) and the axis (12) of the measurement conduit (30) lies in the range from approximately 30° to 60°.

7. The device according to claim 1, characterized in that at least one opening (60) is provided in the deflection conduit (31), which produces a connection to the medium circulating around the device (1).

8. The device according to claim 4, characterized in that the thickness of the wall of the base part (45) and the cover part (46) is constant in the vicinity of side faces (39, 40) that extend parallel to the surface (24) of the measurement element (21).

9. The device according to claim 4, characterized in that recesses (48) are provided in the base part (45), at least in the vicinity of the measurement conduit (30), which produce a

constant wall thickness of the ~~faces~~ (37, 38) of the measurement conduit (30).

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